

ART 34 AMDT

CLAIMS

- 1 A method of controlling operation of an electric submersible pump (20,22) in a hydrocarbon well (1), including determining the velocity of the produced fluids with a flow-meter (32), whereby the pump is provided with electrical power with an electric supply source (26) positioned at the surface and capable of delivering a power of between 100 and 1000 kW, and a current of between approximately 10 and 100 A, characterized in that the flow meter (32) comprises an electromagnetic flow meter which is supplied with electrical power from the electrical supply source (26).
- 2 The method of claim 1, characterized in that the well (1) further comprises production tubing (14) extending from the bottom of the well (4) to a well head (2), the pump (20) being carried on the production tubing (14).
- 3 The method of claim 1 or claim 2, characterized in that the well (1) further comprises surface tubing (30) positioned outside the well (1) and connected to the production tubing (14), the electromagnetic flow-meter (32) being carried on the surface tubing.
- 4 The method as claimed in any preceding claim, wherein the pump (20) and the electromagnetic flow-meter (32) are connected in series.
- 5 The method as claimed in any preceding claim, further comprising providing inductive coupling capable of generating generate currents of different frequencies for the flow-meter (32) and the pump (20).